

TAB A #4
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)
)
LeRoy G. Hagenbuch) Group Art Unit: 234
)
Serial No. 874,273)
)
Filed: June 13, 1986) Examiner:
)
Title: Apparatus And Method)
For Locating A Vehicle)
In A Working Area And)
For The On-Board)
Measuring Of Parameters)
Indicative of Vehicle)
Performance)

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. §§1.56 and 1.97, applicant directs the Examiner's attention to the references listed on the attached Form PTO-1449. The references listed on the attached form PTO-1449 include both patents and printed publications.

Regarding the cited patents, the patent to Teach et al. discloses a laserbeam survey method and apparatus to establish both horizontal and verticle surveying reference planes which can be used, for example, to simultaneously and automatically control tool height adjustment and steering adjustment mechanisms in a mobile ditch or trench digging machine. The patent to Juhasz et al. discloses a monitoring and recording system for on-board vehicle monitoring and recording of operating engine parameters. Means are also provided for analyzing the process data in remote computing means to provide printouts for record keeping, maintenance and diagnostic purposes. The patent to Pryor discloses a system for automatically guiding tractors and other farm machinery. The

patent to Franks et al. discloses a vehicle maintenance system wherein an operator is notified to take a vehicle to a maintenance facility in response to data gathered at a remote maintenance cite and processed by the central processing unit at a central records cite. The patent to Boulais et al. is directed to farming equipment and to the problem of adjusting the drag of a plow in order to prevent the drag of the plow from exceeding the driving force available from the horse power of the tractor. The remaining patents appear to be primarily directed to robotics as opposed to analyzing operating parameters to increase operational efficiency.

The following is a listing of each of the printed publications cited in this Information Disclosure Statement and a short statement as to its relevance.

Reference

Relevance

AR	Presents an overview of truck management systems, including system described in parent application No. 717,042.
AS	Generally discloses a vehicle monitoring system from GLI Corporation.
AT	Discloses truck management system of parent application No. 717,042.
AU	Describes a "computer model" for evaluating equipment performance in an open-pit mine.
AV	Describes a system on-board a vehicle for sensing vehicle parameters and processing them on board.
AW	Describes robot guided by on-board laser that scans stationary targets for bar codes.

AX	Describes vehicle location system using "dead reckoning" instead of satellite or land-based triangulation techniques.
AY	Describes satellite-based triangulation system to pinpoint location of vehicle.
AZ	Describes satellite-based triangulation system for pinpointing vehicle position.
BA	Discloses a mine vehicle location system.
BB	Describes the mine vehicle location system generally alluded to in reference BA. Coded transponders are attached to underside of vehicles. Receivers are mounted in bed of rail track for reading code as vehicle passes over the transponder.
BC	Discloses system described in reference BB.
BD	Discloses without detail a vehicle tracking device.
BE	Generally discloses vehicle location systems using "dead reckoning" or low-power microwave transmitters strategically located so as to act as "signposts" for passing vehicles.
BF	Describes vehicle location system using a land-based triangulation approach.
BG	Describes in greater detail the vehicle location system of reference BF.

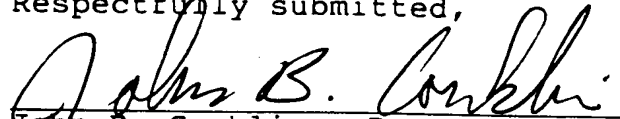
BH	Describes system using transmitter on vehicle and stationary repeaters as "signposts" for locating vehicle and for transmitting data to remote central sites.
BI, BJ, BK	Relates anecdotes concerning performance of GLI Corp. Vehicle Monitoring System (VMS™).
BL	Describes in detail the GLI Corp. Vehicle Monitoring System (VMS™).
BM	Describes a "wireless" modem system.
BN	Describes a mechanical "totalizer" for totalling signals from a plurality of hydraulic load cells.
BO	Describes a single-board microcomputer.
BP	Describes a cableless optical data transmission device.
BQ	Describes system that includes portable bar code reader linked to base station by way of radio waves.
BR	Describes use of bar codes in USPTO to locate application files.
BS	Describes a computer-based system for monitoring performance of engine in a truck. Data is scored and provided as a hard copy printout.
BT	Describes weighing device associated with fifth-wheel mount.

BU

Describes an Analog Input Board allowing micro-computers to monitor analog signals in the presence of high common mode voltages and minimizing the effects of ground loops.

Signed at Chicago, in the County of Cook and State of Illinois this 7th day of May, 1987.

Respectfully submitted,



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